DOCUMENT RESUME

ED 042 509 PS 003 437

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TITLE	The Distribution of Teacher Approval and Disapproval of Head Start Children. Final Report.
INSTITUTION	Syracuse Univ., N.Y.
SPONS AGENCY	Office of Economic Opportunity, Washington, D.C.
PUB DATE	69
NOTE	57p.
EDRS PRICE	EDRS Price MF-$0.25 HC-$2.95
DESCRIPTORS	Classroom Environment, Learning Theories, *Preschool Teachers, Race, *Racial Attitudes, Reinforcement, Sex Differences, *Social Discrimination, Student Behavior, *Student Teacher Relationship, Teacher Aides, *Teacher Attitudes, Verbal Communication
IDENTIFIERS	*Head Start, Office Of Child Development

ABSTRACT

The main purpose of this study was to determine whether or not a sample of white and Negro Head Start teachers exhibited any bias toward a particular sex or race among their students. Bias was defined as a disproportionate distribution of verbal approval and disapproval. The children were also observed to determine their frequency of "blameworthy" and "praiseworthy" behaviors. A secondary purpose of the study was the observation of general classroom interaction in order to examine its relation to the principles of reinforcement learning theory. Thirteen classes (126 children in all) served as sample, each with a teacher and a teacher aide. Measurement involved pre- and posttesting, 4 hours of classroom observation, and extensive interviews. Results indicate that, with one or two exceptions, the teachers exhibited no racial or sexual bias. It was also found that the Head Start teachers used more disapproval than approval, a pattern of behavior inconsistent with the principles of general reinforcement theory for classroom interaction. Furthermore, the teacher's use of disapproval and approval was not contingent on specific behaviors. There was a significant negative relationship between teacher disapproval and an index of motivation. (MH)

ED042509

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The Distribution of Teacher Approval and Disapproval of Head Start Children

FINAL REPORT

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and

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1969

The research reported herein was conducted pursuant to a contract with the Office of Economic Opportunity, Contract No. OEO-4120 and the Evaluation and Research Center, Project Head Start, Syracuse University. William J. Meyer, Director.

PS003437

The Distribution of Teacher Approval and Disapproval of Head Start Children

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The primary focus of this report is an examination of the distribution of teacher initiated verbal statements of approval and disapproval among four categories of Head Start children· Male Negroes (MN), Male Whites (MW), Female Negroes (FN), and Female Whites (FW). This study also examines the effects of teacher race and teacher-aide race on the distribution of approval and disapproval among the four groups of Head Start children. These variables were examined in the context of an evaluation program, defined by the Office of Economic Opportunity, which yielded a large amount of data concern ing the general impact of preschool programs on culturally deprived children. The data derived from the Syracuse sample are available through the Office of Child Development. The data analyses provided in this report are directly related to the specific purposes of this project.

Most every psychology textbook concludes that positive rein· forcement significantly benefits learning. An enormous number of laboratory type experiments lend support to the generalization that learning is most rapid when reinforcements are administered immediately following a desired response and when the reinforcing stimulus is appropriate to the organism. There are also studies which indicate that positive reinforcement has beneficial effects on learning and performance in the classroom (Hurlock, 1924· Chase, 1932· Thompson and Hunnicutt, 1944). Despite the substantial evidence supporting the

generalization that positive reinforcement is beneficial to children's learning and probably to their overall psychological adjustment. there is a substantial literature indicating that teachers are more likely to use verbal disapproval than verbal approval in their day to day contacts with the children in their classrooms. In one series of studies (Anderson and Brewer, 1945, 1946; Anderson, Brewere & Reid, 1946) it was found that teachers of preschool children used more dominative, as opposed to integrative, statements in their interactions with the children. These investigators further reported that the vast majority of these dominative statements were directed at relatively few children.

The finding by Anderson and his colleagues that relatively few children receive a majority of the negative statements made by teachers is of particular interest to this study. There is reason to believe that teachers tend to focus their disapproval statements on children who are less well adjusted and/or less intelligent (deGroat & Thompson, 1949; Datta, Schaeffer, & Davis, 1968) and on male children (Meyer & Thompson, 1956; Meyer, 1960). Although studies using direct observational techniques of teacher behaviors toward white and black children are not known to the authors, one study (Lamb, Ziller, & Maloney, 1965) suggests that Negro males may be the recipients of more verbal disapproval from their teachers than any other group of children. The Lamb, et al., study, it should be noted, did not employ direct observational procedures but relied entirely on teacher descriptions of the children.

A fairly obvious inference that can be drawn from these studies is that teachers tend to focus their verbal disapproval on those children whose behaviors are more disruptive and generally outside the

domain of socially acceptable standards as defined by the female middle-class culture and/or those children whose academic and social behaviors tend to put the teacher in something less than a positive light. Male children then would be expected to encounter more teacher disapproval because their culture is at least more tolerant of aggression than is perhaps acceptable in the traditional school setting. Similarly, poorly adjusted children (adjustment is usually defined in terms of disruptiveness of behavior) and low achieving children provide little in the way of reinforcing stimuli for the teacher and are more likely to frustrate her in her own efforts with the children. One might conjecture also that girls, whose behaviors presumably are more compatible with those of their female teachers, would receive more praise than boys. According to Meyer and Thompson (1956) this is not necessarily the case. In their study there were no significant differences in the frequency of praise received by males and females although there was a highly significant difference in the frequency of blame.

This study examines the use of verbal approval and disapproval by a sample of Head Start teachers. Specifically, it is predicted on the basis of previous research that Head Start teachers in general will give more verbal disapproval to boys, regardless of race, than to girls. Since there is no theoretical or empirical basis for expecting these teachers to give girls more praise, there is no basis for making a directional prediction with respect to the teachers' use of verbal praise. This study will also examine the teachers' use of disapproval with respect to the race of the child. Studies by Datta, et al., 1968 and Lamb, et al., 1965, suggest that Negro children will receive a disporportionately greater share of teacher disapproval and probably a disproportionately lower share of teacher approval. Finally, teachers'

use of disapproval will be examined in terms of the sex and race of the children with the specific anticipation that Negro males will receive a disproportionately greater share of teacher disapproval than the other three combinations of sex and race.

Two additional variables were examined in this study. Teacher race was included in an effort to determine if an interaction existed between race of teacher and sex and race of child. Relatively little is known about the similarities and differences of black and white teachers as they perform in integrated classrooms. There are data indicating that white teachers have relatively low opinions of black children and there is a commonly held belief that black teachers behave more positively toward the black children in their classes. The issues involved here are complex and should be considered carefully. It would be, in our opinion, a gross oversimplification to state that white teachers, simply because of prejudice, would be more dominative or punitive towards black children. It must be recalled that white teachers are generally punitive towards those white children, usually boys, who represent the lower end of the distribution in terms of both scholastic aptitudes and social adjustment. Since aptitude and social adjustment are relative, there almost must exist a group of children, in any class, whose behaviors are sufficiently divergent from the norm to instigate teacher disapproval. It is possible that, for a variety of reasons, a disproportionate number of Negro children, but especially boys, are at the bottom of these distributions (the MN children in this study have the lowest average IQ) and thus receive a great deal of teacher disapproval. It is equally possible, of course, that the attitudinal and behavioral characteristics of both lower-class

blacks and whites are identical but that, in fact, white teachers selectively give more blame to the blacks. With respect to the Negro teacher, it must be kept in mind that she has successfully met the expectations of the white middleclass and may well have incorporated these expectations into her general attitude. In this case one might expect no differences between black and white teachers in their behaviors toward any of the four sex by race categories of children. One could also argue that because of the black teachers' greater sensitivity to the problems of a racial minority, the black teacher would be less inclined to exhibit her disapproval toward members of her own race. On the other hand, she may exhibit more disapproval because of her convictions about the values of education and/or conformity to middle-class expectancies. Finally, the possibility exists that Negro teachers will exhibit more disapproval towards white children even though their behavior is similar to that of the black children.

In our efforts to assure that our conclusions, whatever they might be, would have the utmost validity, another variable was included in this study; namely, an index of the degree to which the sex by race combinations of children indeed exhibited "praiseworthy" and "blame worthy" behaviors. These data, it was felt, would permit us to assess the degree to which the teachers' use of approval and disapproval related to, in general terms, society's definitions of acceptable and nonacceptable classroom behaviors. Thus, if it turned out that white teachers were giving a disproportionately greater amount of disapproval to black males when in fact the black males displayed the same incidence of 'blameworthy" behavior as the other groups, then we could

PS 003437

more comfortably conclude that racial bias was operating. If, on the other hand, more disapproval was received by black males and they indeed demonstrated more "blameworthy" behavior the conclusion that racial prejudice was operating would appear to be inaccurate, or at least less accurate.

Although the major focus of this study is on the interaction of teacher race and child characteristics in terms of teacher use of verbal approval and disapproval, the study also provided an opportunity to examine the degree to which teachers use approval and disapproval contingently. One might argue that the use of noncontingent approval and disapproval would have little effect in terms of changing a child's behavior. Since we know of no data in which direct observations have been made of the contingent behavior of Head Start teachers, provisions were made in our data collection procedure to ascertain the frequency with which teachers respond to specific behavioral occurrences.

METHOD

Classes. The classes used in this study all participated in the 1968-69 national evaluation of Project Head Start and were conducted on a full-year basis of nine months' duration. Thirteen classes were selected: six had a white head teacher and Negro aide; four had a Negro head teacher and white aide; three had a white head teacher and white aide. All head teachers and aides were female. Nine classes were located in the upstate New York area and were part of the Syracuse University evaluation sample, and four classes were located in Florida and were part of the University of South Carolina evaluation sample. Although four combinations of the teacher/aide ethnic membership were the ideal, only three of these (White-White, White-Negro, Negro-White) could be located in the geographic areas which the Syracuse and University of South Carolina E & R Centers covered.

The distribution of race and sex within classes were two important considerations in sample selection. Ideally, the classes should have been relatively evenly distributed (60%-40%) on both characteristics. The selection procedure for Head Start classes, however, is highly dependent on the racial composition of the geographic areas in which the classes are located, and unfortunately the desired race/sex distributions could not be found. Prior to sample selection we were assured access to a group of four urban racially integrated classes staffed by Negro head teachers and Negro aides. This would have completed the teacher/aide ethnic combinations and comparisons between four teacher/aide ethnic groups could have been made. However, in the fall when the Head Start programs began, the expected classes were not integrated for child ethnic groups and access to only one of these was given. In an attempt to locate classes staffed by Negro teachers and Negro aides, other E & R Centers were contacted. Some centers had the desired classes but due to prior commitments these could not be used in the Syracuse study. It was necessary, therefore, to eliminate the Negro teacher/Negro aide group. Table 1 shows the race and sex characteristics of the final sample classes.

Table 1

Sex and Race Composition of Classes

Teacher/Aide Race	N	Range %Male	Range %Female	Range %White	Range %Negro
W/N	6	37-66	34-63	20-69	31-80
N/W	4	41-60	40-59	24-50	60-76
W/W*	3	23-54	46-67	23-100	0-67

*One class was 100% white in this category.

The number of children enrolled in each class ranged from 13 to 21, with most classes having between 15 and 17 children. Each class was staffed by a paid head teacher and teacher aide. On occasion, volunteers were present in the classes but they were not included in this study.

Subjects. The three teacher/aide combinations and four combinations of child race and sex (male white, male Negro, female white, female Negro) produced 12 cells with a total of 126 children. The children were part of a larger sample that was used in the national evaluation of Head Start classes which included, in part, individual testing on a pre- and posttest basis. Because of evaluation guideline requirements concerning age and prior Head Start experience, not all children enrolled in a class were used in the evaluation. The selection of children used in the evaluation sample naturally limited the selection of children used in this study. The original design of this study called for equal N's in each cell, however, the demographic characteristics of the Head Start center enrollments did not make this possible. In some cases, after evaluation sample selection, it was found that one ethnic group of children was not available in a class, e.g., no male whites. This necessarily limited the within-class comparisons that could be made: however, pooling children across classes yields four ethnic groups between which compariosns could be made. In an attempt to keep the cell N's approximately equal and to have the four child ethnic groups represented as much as possible by class, those classes in which the four groups were present were given first priority for inclusion in this study. In order to increase cell frequencies children from other evaluation sample classes were randomly selected for inclusion in the sample. Because the study was done after pretesting and well into the mid-year of the Head Start programs, it was found that certain

children had dropped out of the classes and this further made the cell frequencies unequal. Table 2 shows the final sample characteristics by race, sex and class for this study. Because there was a paucity of white males and females, it was necessary to include one all white class.

Table 2

Sample Characteristics by Race, Sex and Class

	Teacher/Aide Combination			
Subject Combination	WN(6)	NW(4)	WW(3)	Total (13)
Male White	13	7	10	30
Male Negro	15	11	4	30
Female White	13	5	9	27
Female Negro	14	16	9	39
Totals	45	39	32	126

The 126 children included in this study were all of preschool age, having a mean CA of 55.9 months at the time of pretesting and 63.5 at the time of posttesting.

Table 3

Means and SD's of Chronological Age at Pre- and Posttesting

	Male White		Male Negro		Female White		Female Negro		Total	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
N	30	30	30	30	27	27	39	39	126	126
M	55.9	63.1	56.5	64.2	55.6	63.1	55.9	63.4	55.9	63.5
SD	5.5	6.4	4.9	5.2	6.5	6.6	7.1	7.7	6.2	6.6

The mean chronological age gain from pre- to posttesting for all children was 7.5 months. The slight differences between CA's for the groups indicates a relatively homogeneous sample of children, all of whom were of preschool age at the time of pretesting. The children were not unlike the national sample of Head Start children, all of whom must be of preschool age in order to participate in a program. (Preschool age is defined as the last year of age prior to a child's first enrollment in school. In the Syracuse sample this would be approximately four years of age, and in the University of South Carolina sample five years of age [no kindergarten].)

The pre Stanford-Binet scores for the four groups of children are shown in Table 4. These data indicate that the children are not unlike those typically found in Head Start classes. Thus, at least on the intelligence dimensions, these children are not atypical.

Table 4

Means and SD's, pre Stanford-Binet Testing

	MW	MN	FW	FN	Total
N	29*	30	25*	39	123*
$\bar{X}$	90.7	80.5	83.0	83.1	84.2
SD	12.7	15.5	15.4	13.3	14.7

*Unequal N's result from untestable children.

Procedure

A. Instrumentation. The national evaluation program of Head Start involved a series of pre and posttesting of selected children, four hours of classroom observation, and interviews with parents of children as well as with teachers, aides and administrative staffs of the centers. The individual tests comprising the evaluation were: Stanford-Binet, Form L-M scored by the Hertzig-Birch method· Gumpgookies Test of Achievement

Motivation; Revised Preschool Inventory· Animal House of the WPPSI; the Play Situation-Picture Board Sociometric Technique; the Draw-A-Line test. Eight teachers filled out the Adaptive Behaviors Rating Scale (See Appendix A for a copy of this scale) for 75 of the children in this study. The other teachers did not fill it out because of prior administrative work. Demographic information concerning families was obtained through interviews with parents of the children, and information concerning center staffs was also obtained by interview. The individual testing was carried out during the first four weeks of class (exclusive of the first) and during the last four weeks (exclusive of the last week). The tests were administered by trained testers who had had prior experience in testing or who were trained by a senior member of one of the evaluation staffs. (All the data derived from these instruments are on file at the Office of Child Development.)

From the above series of individual tests, the following were chosen as criterion variables which might relate to the distributions of teacher praise and blame: Stanford-Binet, Draw-A-Line, Gumpgookies, and the Adaptive Behaviors Rating Scale.

B. Teacher Observations of Praise and Blame. The nature of the praise and blame observations was to record instances of positive and negative verbal statements which teachers and aides directed to children in their classes. A praise was recorded whenever the teacher (aide) initiated an interaction with a child in which she verbally expressed approval of some displayed behavior. A blame was recorded whenever the interaction involved the teacher (aide) verbally expressing disapproval of a behavior. Only verbalizations of praise and blame were attended to--facial and gestural responses were not recorded insofar as they

were independent of a verbalization. The child to whom the praise or blame was directed was recorded along with the nature of the situation in which this occurred. A series of codes was used to identify the nature and context of the verbalization in which the praise or blame took place. Categories which comprehensively included the types of behaviors for which children typically receive praise or blame were defined from the pilot observations. The categories and their codes are as follows: (the first digit signifies praise (0) or blame (1) and the second digit signifies the context of the activity).

Code	Category
01,11	Cognitive-Cognitive--This includes language, concepts, memory,any verbalizations for which the child is praised or blamed and which involve a degree of cognitive skill used to formulate the verbalization.
02,12	Cognitive-Motor--This includes activities in which cognitive skill us used to carry out a motor activity. Examples are cutting, puzzles, small muscle activities.
03,13	(Non) Conformity--This includes line-up, sitting in class, following directions or routine of the class. It refers to activities which are part of the class schedule, as well as teacher-structured activities in which children are expected to take part (i.e., conform). A rating of blame for conformity would refer to a non-conforming act, and a praise would indicate that the child has complied with the teacher's directions.
04,14	Instrumental Dependency--This is seeking help from another child or adult and refers to a help dependency on the part

of the child. If a child solicits help from the teacher and is given a reinforcement, the rating would be placed in this category.

05,15 Emotional Dependency--This is comfort seeking attention from the adult or another child. A tugging child, or a crying child would be rated in this category if reinforcement were given.

06,16 Aggression--This category covers only fighting, kicking, arguing, and negative emotional outbursts.

07,17 Social--This involves interactions with others in the class, helping the teacher, aide or another child, manners, appearance, reinforcement for acts which the adults in the class deem socially acceptable.

08,18 Asocial--This covers withdrawing, and uninvolved behaviors. Acts which dissociate the child from the rest of the class.

09,19 Motor-Motor--This is large muscle activities routinely performed by children of this age. Bikes, jungle gyms, running, large block play, and toileting are included.

The recording format for the teacher observations of praise and blame listed each child in the class so that analyses could be done by sex and race. Each class was observed for a mean of 11.4 hours with a range from 6 to 18 hours. The observations were scheduled over a three-month time span, and over each time period within the class sessions. The observers were all familiar figures to the children and staff of each class and were stationed so that they could hear and see all activities and yet remain as unobtrusive as possible. Interobserver agreement for total approval and disapproval frequencies ranged from 92% to 99%; for each behavioral category the range was 82% to 90%. The

agreements were done during pilot observations after the categories and recording format was devised. For agreement, three observers were stationed in a class for three 20-minute periods. After observations, the observers compared ratings for total number of recordings, and category ratings. Agreements for approval ranged from 93% to 99% and for disapproval 92% to 96%.

Because the recording format listed the children in each class, it was possible to tally approval and disapproval instances directly from the observation schedules. It was further possible to tally these by category as these were specified by the observers. and also to sum over child ethnic groups.

C. Individual Child Observations. This component of the study involved the gathering of observational data for the purpose of determining the frequency with which children emit "praiseworthy" and "blameworthy" behaviors. The observational procedure also included recording the consequence of the child's act: that is, the teacher's response to a "praiseworthy" or "blameworthy" act. Actual data collection involved a modification of the APPROACH procedure developed by Caldwell and her colleagues; our coding system was different and behaviors were not coded during the observation.

An immediate problem requiring resolution was the definition of "praiseworthy" and "blameworthy" behaviors. The solution was largely intuitive in the sense that a list of behaviors in each category were defined by the investigators. These behaviors derived from observing teacher responses and from an overall view of how society in general would view the behaviors. Thus aggressive behaviors, failure to obey rules, spilling and/or messing in general were

defined as "blameworthy" behaviors. "Praiseworthy" behaviors included following directions, giving correct answers to problems, being polite, and cleaning up after a project. Note that no effort was made to define "blameworthy" or "praiseworthy" in any psychological sense, rather our focus was entirely on a societal normative perception.

In an effort to estimate the validity of the behaviors selected, a paired-comparison procedure was used. Three Head Start teachers were given the paired-comparisons where each pair involved a "praiseworthy" and a "blameworthy" act and were told to check first the "praiseworthy" behavior and then, a few days later, the "blameworthy" behaviors. There was 100% agreement among the teachers and their choices agreed with ours98 per cent of the time. Disagreements occurred with respect to dependency behaviors where our choices were more frequently"blameworthy"and the teachers choices were "praiseworthy." This is not surprising in that dependency can be seen as a positive attribute. The classification of those behaviors where disagreements occurred were changed to conform with the teacher's views. This strategy, it was felt, was consistent with our overall decision to define the categories from a normative view.

The method of observation involved obtaining continuous records of childrens' behavior by means of tape-recorded oral descriptions of ongoing activities. The tape recordings were then transcribed for later coding and analyses. The focus of the analysis and coding concerned "praiseworthy" and "blameworthy" behaviors which were evinced by the child, and the consequences of these behaviors. In order to obtain as accurate observations as possible, the observers were trained by an experienced observer for four weeks. A major part of this training involved lectures and demonstration of the method.

The observers were thoroughly indoctrinated in the method and focus of the observational procedures and were then trained in situ. After several sessions in which the trainer was observed, the observers did their own observations with supervision. Each observer had a total of 60 minutes of practice observations (six 10-minute periods) and these observations were scored for agreement. Each observation was monitored either by the trainer or by another member of the observation team. The tape was then played back and discussed in an attempt to make the observers more sensitive to the recording of behavioral chains. An important aspect of the observations was the recording of all child and teacher verbalizations so that the protocols could be analyzed for instances of contingent positive and negative verbalizations from the teacher relative to the emitted behavior. Because the observers used were the same observers who had done the teacher observations, it is felt that they were already sensitive to praise-blame verbalizations on the part of the teachers and aides. After approximately three weeks of such training, interobserver agreement was established between two observers by comparing two protocols for instances of recordings of child behaviors. The unit used was verbal clauses which described the same child behavior chains. For five observations, interobserver agreement between two observers ranged from 80% to 92%. Each sample child was observed for a mean of 54.5 minutes, SD=19.7 (range 10 to 90 minutes).

D. Coding of the Individual Observations. The coding of the individual observation protocols was geared to analyses of the frequencies of intentionality of the behaviors ("praiseworthy" and "blameworthy") using a coding system which was identical to that used in coding the teacher

observations. A four digit code was devised: the first two digits were the same as the teacher observation codes: the third digit signified whether the act was attended to by the teacher or aide (did she say anything or ignore the act); and the fourth digit signified whether an aide or a teacher attended. An example from a behavior protocol illustrates the system:

Child brings painting up to teacher and teacher says

"What a good boy you are and what a nice painting you made."

Clearly, the child has received a praise statement from the teacher for a "praiseworthy" act. The coding for this episode is 0211. The 02 signifies the behavior was in the cognitive-motor category (same as teacher observation); the third digit 1 signifies the act was attended to (0 signifies it was ignored); the fourth digit 1 signifies the teacher was the adult who responded to the act (2 signifies teacher aide, 0 signifies again that the act was ignored). Because the observers were trained to record the childrens' behaviors in chains, it was possible to code whether the child's act was attended to or not. In scoring the protocols, the act was underlined and coded in the margin. If an act was ignored the observers were trained to specify this in the observation record. In cases where it was not possible to specify who ignored, the adult in charge of the room at the time of the observation was coded in the fourth digit.

The coding was done by advanced graduate students in Developmental Psychology. A series of group scoring sessions was conducted to familiarize the coders with the system and the types of behaviors to be coded. After analysis of five protocols in a group, interrater agreement was established. For total behaviors coded, agreement ranged

from 87% to 95%; for agreement of codes, the agreement was 82% to 89%. After the protocols were all scored, it was possible to tally instances of behaviors which were attended to and not attended to, the nature of these(praise and blame),and the context within which the behavior occurred (i.e., conformity category).

Results

Although the primary concern of this project is with the distribution of teacher approval and disapproval, it may be helpful in understanding the outcome of these observations to briefly examine the children's pre- and posttest performance on the Stanford-Binet. Examination of Table 4 shows that the mean pretest IQ, for all groups combined, was 84.2 while the average posttest IQ was 91.5. Table 5 shows the means and SD for the posttest scores.

Table 5

Means and SD's, post S-B Testing

	MW	MN	FW	FN	Total
N	28*	30	24*	38*	118*
$\bar{X}$	97.0	87.0	86.9	90.7	91.5
SD	13.0	16.0	19.2	13.0	11.3

*Unequal N's result from untestable children.

Examination of the mean IQs in terms of subject characteristics on the pretest indicates that the white males attain the highest average performance while the black males achieve the lowest average performance. An analysis of variance between the four groups indicated that the differences are statistically significant ($F = 2.8$: $df = 3$ & 119, $p =< .05$). An analysis of variance between groups on the posttest scores was not statiscally significant. Within each subject category, an analysis

of the change scores indicates that the average gain in IQ for each subject group is statistically significant. Additional analysis indicated that differences in change scores among the four groups were not statistically significant. This means that no one group gained more than another. In considering the average overall gain, it should be noted the gain of 6.3 IQ points may indicate either regression effects or an improvement in motivation. It is doubtful, however, that these gain scores reflect meaningful changes in levels of cognitive functioning.

Table 6

Means and SD, IQ Change Scores

	Male White	Male Negro	Female White	Female Negro	Total
N	27	30	23	36	118
M	6.6	6.6	4.7	7.5	6.5
SD	8.2	13.7	8.9	12.1	11.3

Another crucially important subject variable in this study is the degree to which the children evidence "praiseworthy" and "blameworthy" behaviors. Since the amount of observation time per child varied, it was necessary to analyze the data in terms of a rate measure. The rate measure involves dividing the observed frequencies in each category ("praiseworthy" vs "blameworthy") by the total number of minutes of observation time. This procedure was followed for each child and forms the basis for statistical analyses. Table 7 shows the means and SD's for each of the four subject groups within each of the classes. The first series of analyses were conducted within each class. This

strategy seemed reasonable on the assumption that the classrooms were not random selections from a general population. In only one class was there a significant difference among the groups for either "blameworthy" or "praiseworthy". In this class it turned out that black males evidence significantly greater "blameworthy" and "praiseworthy" behavior suggesting rather clearly in this instance that, in this particular group, the black males had a higher activity level. None

See Table 7

of the comparisons between sex were statistically significant nor were there any differences that occurred in any of the classes between the white males vs white females vs black females.

The second analysis involved pooling the rate measures of the children in each subject category within each class and then analyzing the averages of these measures both between subject groups and classes. This procedure is essentially a repeated measures analysis of variance involving variation between subject groups, variation between classes (possibly involving teacher effects), and the interaction of subject groups by classes. The interaction term serves as the error term for assessing statistical significance. The first analysis was done on the "praiseworthy" behaviors for those classes with white teachers. The results of this analysis indicate that there are no group differences ($F = 1.3$; $df = 3$ & 18; $p > .05$) but there was a statistically significant difference among classes ($F = 3.2$; $df = 6$ & 18; $p = .05$). This significant effect means that for all groups of children combined, there is significant variation in the emission of 'praiseworthy" behaviors. With respect to the rates of "blameworthy" behavior, there are no significant differences among the subject groups ($F = .6$; $df = 3$ & 18; $p > .05$) nor are there any differences among

P - Praise
B - Blame

Table 7

Means and SD's for Behavior Rates By Child Group and Class

Class		MW			MN			FW			FN			Total		
		N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
1	P	3	.22	.04	2	.22	.11	3	.12	.06	5	.11	.04	13	.15	.08
	B	3	.12	.03	2	.19	.16	3	.07	.05	5	.08	.07	13	.10	.09
2	P	3	.05	.04	4	.13	.09	2	.04	.00	3	.26	.21	12	.13	.15
	B	3	.06	.02	4	.07	.03	2	.05	.01	3	.10	.08	12	.07	.05
3	P	4	.08	.04	4	.16	.06	4	.14	.05	2	.21	.05	14	.14	.06
	B	4	.19	.19	4	.29	.16	4	.07	.05	2	.17	.06	14	.18	.16
4	P	2	.23	.02	1	.18		1	.66		1	.75	-	5	.41	.24
	B	2	.12	.03	1	.16	-	1	.15		1	.35		5	.18	.09
5	P	1	.20	-	.1	.03		1	.09		2	.23	.10	5	.16	.10
	B	1	.54		1	.35		1	.13		2	.16	.13	5	.28	.17
6	P	0	-		3	.17	.10	2	.13	.03	1	.38		6	.19	.11
	B	0	-		3	.27	.17	2	.15	.10	1	.35		6	.24	.15
7	P	1	.40	-	3	.53	.12	3	.37	.02	3	.25	.08	10	.38	.14
	B	1	.34		3	.54	.06	3	.20	.03	3	.09	.08	10	.25	.15
8	P	2	.07	.02	4	.12	.06	1	.16		5	.13	.06	12	.12	.06
	B	2	.05	.05	4	.25	.08	1	.20		5	.12	.01	12	.16	.09

Table 7 (Continued)

		MW			MN			FW			FN			Total		
Class		N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
9	P	2	.18	.06	4	.20	.08	0	-	-	6	.16	.05	12	.17	.06
	B	2	.18	.10	4	.16	.09	0		-	6	.17	.04	12	.17	.07
10	P	2	.25	.05	0	-	-	1	.07	-	2	.21	.07	5	.20	.08
	B	2	.43	.05	0		-	1	.11	-	2	.23	.01	5	.20	.05
11	P	2	.19	.15	1	.25	-	1	.60	-	6	.36	.18	10	.34	.19
	B	2	.11	.03	1	.20	-	1	.30	-	6	.11	.09	10	.14	.10
12	P	5	.21	.10	0	-	-	5	.26	.13	0	-	-	10	.23	.09
	B	5	.06	.04	0	-	-	5	.12	.08	0	-	-	10	.09	.07
13	P	3	.21	.08	3	.15	.07	3	.19	.04	3	.11	.03	12	.17	.07
	B	3	.31	.11	3	.19	.05	3	.19	.10	3	.10	.03	12	.20	.11

classes (F = 1.5; df = 6 & 18· $p > .05$). This result indicates that the emission of "blameworthy" behaviors is relatively consistent among the four subject category groups and that there is no variation across classrooms. The analyses with respect to rates of "praiseworthy" behavior within the two classrooms with black teachers indicated no significant differences between the groups (F = .7· df = 3 & 3; $p > .05$) but a significant difference between the two teachers (F = 14.0· df = 1 & 3; $p < .05$). The results with respect to rates of "blameworthy' behavior revealed no significant difference between groups (F = 1.3; df = 3 & 3; $p > 05$) nor was there a significant difference between teachers (F = 1.5; df = 1 & 3; $p > .05$).

The third and final analysis involved pooling subject groups over classes and analyzing for effects of teacher race within each of the subject categories. The resulting series of t tests for both rates of "praiseworthy" and "blameworthy" behavior failed to reveal a single significant difference. The outcome of these analyses indicates that race of teacher does not influence the rate of "praiseworthy" or "blameworthy" behavior for any of the groups of subjects.

In summary, the results of the analyses of the children's behavior indicate that there are no overwhelming differences among the four groups of subjects in terms of their rates of emission of either "praiseworthy" or "blameworthy" behaviors. There is some evidence to indicate, however, that rates of "praiseworthy" behaviors are influenced by teacher characteristics. Although the evidence is not unequivocal, it appears that teachers vary in terms of the amount of activity they permit among their children and the higher this activity

level the more likely it is that the children will emit both "praiseworthy" and "blameworthy" behaviors. This latter interpretation is only supported, however, in terms of the "praiseworthy" category. There is also the suggestion in the data that when a free situation does exist, black male children are somewhat more likely to surpass the other categories of children in both "praiseworthy" and "blameworthy" behaviors. In terms of the basic purpose of these observations, it must be concluded that there is apparently no behavioral basis for anticipating that any one of the subject categories would receive more teacher disapproval or, for that matter, more teacher approval. The next series of analyses will focus on how the teachers actually did distribute their verbal approval and disapproval.

A preliminary examination of the frequencies of approval and disapproval suggested that there were substantial teacher differences. It therefore seemed necessary to determine if the variation among teachers was significantly different before subjecting the data to further analysis. As was the case with the observations of the children's behavior, there was variation in the amount of observation time between teachers making it necessary to convert the frequency scores for approval and disapproval into rate measures by dividing the observed frequencies by time observed. The unit of time was by the hour resulting in a measure of rate per hour. The mean rates for teacher approval and disapproval by subject category and class is presented in Table 8. These data were analyzed by means of a repeated measures analysis of variance in which it is possible to extract variation attributable to subject grouping and teachers. The subject category by teacher interaction serves as the error term. In addition, analyses were performed separately for the white teachers

and black teachers. The results of these analyses indicated that there were no differences in the rates of approval or disapproval received by the children but there was a significant difference among the teachers. (White teacher praise, $F = 28.38$ $df = 7,21$ $p < .01$ White teacher blame, $F = 15.18$; $df = 7,21$; $p < .01$ Negro teacher praise, $F = 15.75$; $df = 3,9$ $p < .01$ Negro teacher blame, $F = 4.61$ $df = 3,9$, $p < .05$.) These data indicate that although there are real differences among teachers in the frequency with which they give approval or disapproval to the youngsters in their rooms, they distribute their approval and disapproval relatively evenly among the race and sex groupings of children.

Table 8

Mean Rates. Teacher Observations Praise and Blame*

Class		MW		MN		FW		FN	
White/White		N	$\bar{X}$	N	$\bar{X}$	N	$\bar{X}$	N	$\bar{X}$
1	Praise	4	.6	4	.7	7	.6	5	1.3
	Blame	4	.9	4	1.5	7	.6	5	.5
2	Praise	6	.5	6	.2	7	.2	2	.5
	Blame	6	1.1	6	.9	7	.9	2	1.1
3	Praise	7	.3	9	.3	6	.2	10	.4
	Blame	7	.4	9	.5	6	.2	10	.5
4	Praise	4	.7	2	1.0	4	.4	1	.3
	Blame	4	.9	2	1.1	4	.9	1	.5
5	Praise	5	.8	3	.5	5	.8	3	.8
	Blame	5	1.7	3	1.6	5	1.5	3	1.6
6	Praise	2	.5	7	1.1	2	1.2	4	1.5
	Blame	2	3.5	7	5.1	2	2.8	4	4.1

Negro/White								
7	Praise	1	.5	3	1.2	5	.7	4	.6
	Blame	1	3.9	3	4.4	5	4.5	4	4.0
8	Praise	5	.4	5	.4	2	.6	8	.6
	Blame	5	1.4	5	.4	2	1.9	8	2.4
9	Praise	2	3.8	8	3.2	2	1.4	8	2.9
	Blame	2	.5	8	.4	2	.2	8	.3
10	Praise	5	.4	5	.5	2	.5	6	.7
	Blame	5	6.2	5	.6	2	.6	6	.7
White/White									
11	Praise	2	2.4	2	3.2	2	2.2	9	2.9
	Blame	2	4.4	2	5.0	2	.9	9	3.4
12	Praise	8	.8	0	-	8	.3	0	-
	Blame	8	2.2	0	-	8	1.5	0	-
13	Praise	5	.8	4	1.0	5	.8	6	.8
	Blame	5	1.5	4	1.4	5	.7	6	.6

*Based on all children in a class.

Similar analyses in the rates of approval and disapproval for the aides indicated that there were no significant differences between groups for the white aides but there was a significant difference in the rates at which aides employed verbal approval. (White aides praise, $F = 10.41$ $df = 5,15$; $p < .01$ White aides blame, $F = 9.46$ $df = 3,15$; $p < .01$). With respect to the use of verbal disapproval, the analyses of variance indicated a significant group difference but the difference among aides was not statistically significant. Inspection of the data indicated that the white aides gave white females fewer disapproval statements with no differences among the remaining three groups. Analyses involving the distribution of approval and

disapproval for black aides indicated significant differences among the subject categories and significant differences among the aides in terms of praise but there were no group or aide differences for blame. Inspection of the mean rates indicates that one of the black aides gave white boys the least amount of verbal approval but there were no other differences.

In view of the significant teacher and aide effects, it was decided to analyze the data within classes. These analyses resulted in a series of 2 by 2 analyses of variance with sex and race as the variables. This series of analyses indicated that there were only two classes in which significant effects occurred for teachers and one class in which significant effects occurred for an aide. One of the teachers was a black teacher in the South, in which the analyses indicated that black children received more praise than whites ($F = 4.6$; $df = 1, 17$; $p < .05$; boys received more praise than girls ($F = 26.2$; $df = 1, 17$; $p < .01$), and a significant race by sex interaction ($F = 15.3$; $df = 1, 17$; $p < .01$). Examination of the means for each of the four groups of children indicated that white girls received the least amount of approval with little or no difference occurring between the races for males. This interaction then seems to indicate that both the main effects of race and sex are attributable to the high number of approval contacts received by black females. It should be noted that this teacher, who was observed for a total of 15 hours, had 888 approval contacts with the children as opposed to 98 disapproval contacts. Of the total of 888 approval contacts, only 42 of them were received by white females. The second teacher for whom significant effects were found is a white teacher also located in the South.

The results of the analyses in that classroom indicated that there were no significant race effects ($F = < 1$), a significant sex effect ($F = 18.7$; $df = 1, 16$; $p < .01$), and no significant race by sex interaction ($F = < 1$). Examination of the data indicate that boys are receiving reliably more disapproval than girls but it is also clear that race does not apparently enter into the use of disapproval. In the case of the one aide where significant effects occurred, it is interesting to note that this is the Southern white teacher's aide for whom significant effects were found. In terms of race differences, the analyses indicate that there were no significant differences in the use of disapproval statements with the children ($F = 1.6$; $df = 1, 16$; $p > .05$), a significant sex effect ($F = 14.6$; $df = 1, 16$; $p < .01$), and a significant race by sex interaction ($F = 5.4$; $df = 1, 16$; $p < .05$). Examination of the relevant means indicates that white males are receiving more disapproval than any of the other groups with white females receiving the least amount of any of the groups. In all probability the disproportionate amount of disapproval received by the white males is the major contributor to the significant interaction.

Summarizing the results of the analyses concerning teacher distribution of approval and disapproval, the data warrant the conclusion that there are no apparent systematic race effects involved in how teachers distribute their approval and disapproval. The data further suggest that sex of subject is a somewhat important variable with males showing something of a tendency to receive both more approval and disapproval than females. These effects are apparently generalizable across a geographic diversity of Head Start classes among white teachers but are certainly restricted in scope with respect to the sample of black teachers which was only two. at any rate, there

appears to be no evidence on the basis of these analyses that any systematic racial bias is operating.

In considering the major analyses concerning teacher approval and disapproval, the possibility existed that major effects were obscured by either inter-subject variability and/or inter-teacher variability. To test this out, a series of post hoc analyses were performed employing extreme groups. For example, we made a distribution of approval rates and disapproval rates and then examined the characteristics of those children falling in the upper and lower quartiles of each of these distributions. A 2 (high approval vs low approval) by 4 (subject categories) contingency table was set up and a Chi-square was used to test for relationship. This was also done for the disapproval distribution. In both cases the Chi-squares did not approach significance, indeed the frequencies in the cells were essentially equal. We performed identical analyses within each of the classes and, with the exception of the two classes already noted, none of the resulting Chi-squares were statistically significant.

Our procedures for determining the frequency of "praiseworthy" and "blameworthy" behaviors among the children permitted us an additional analysis directly related to the purpose of this project. Specifically, in noting the children's behavior, whenever a "praiseworthy" or "blameworthy" behavior occurred we also noted whether the teacher or the aide observed the behavior and made an appropriate verbal comment, either approval or disapproval. Thus, for every child it was possible to determine the percentage of either "praiseworthy" or "blameworthy" behaviors which were responded to by the teacher (aide). In order to analyze this aspect of our data across children and across classes, it was necessary to develop an index that equated all of the groups in terms of observation time. The resulting index, which we are

calling the Contingency Index (CI), was derived in the following way: the number of "praiseworthy" ("blameworthy") behaviors attended to was divided by the total number of "praiseworthy" ("blameworthy") behaviors and this ratio was then divided by the amount of time the child had been observed. Because the ratios were very small, we multiplied the index by 100. The primary question was to determine if the teachers were attending to the "praiseworthy" or "blameworthy" behaviors of one of our subject categories in some disproportionate way. Consistent with our earlier expectations, it was anticipated that the "blameworthy" behavior of black males would be attended to more frequently than the "blameworthy" behaviors of the other groups. The repeated measures analysis of variance which involves testing for group effects with the effects of teachers removed was employed. Among the white teachers, there was no significant subject category effect for CI "praiseworthy" ($F = 2.0$; $df = 3, 18$; $p > .05$) nor was there a significant teacher effect ($F = 1.9$; $df = 6, 18$; $p > .05$). A similar outcome was found with respect to the CI "blameworthy" behavior among the white teachers: the group effect was not statistically significant ($F = 1.8$; $df = 3, 18$; $p > .05$) nor was the teacher effect ($F = 1.4$; $df = 6, 18$; $p > .05$). These results indicate that among our sample of white teachers, there were no systematic differences in the degree to which they attended to either "praiseworthy" or "blameworthy" behaviors of the four groups of children in their classes. Similar analyses performed for the black teachers with respect to the CI "praiseworthy" resulted in no group differences ($F = 1.8$; $df = 3, 3$; $p > .05$) but a significant teacher effect ($F = 16.7$ $df = 1, 3$, $p < .05$). With respect to the CI "blameworthy" behavior there was no significant group effect ($F = 1.2$; $df = 3,3$ $p > .05$)

and no significant teacher effect ($F = 3.5$; $df = 1, 3$; $p > .05$). Thus, among the black teachers there was a significant tendency for one of the teachers to respond more to the "praiseworthy" behaviors of the children but this was done equally among the four groups. The direct observation of teacher approval and disapproval and the frequencies of the children's "praiseworthy" and "blameworthy" behaviors are data which provide an opportunity to describe in an analytic fashion some of what is happening in at least this sample of thirteen Head Start classrooms. The data presented so far focus on differences among the four groups of children, but the presentation does provide a picture of either the teacher's behavior, the children's behavior, or their interaction. The following analyses will focus on these crucial aspects of Head Start classrooms.

Although the earlier data analyses suggested rather clearly that teachers make greater use of disapproval than approval, and that teachers differ significantly in their use of approval and disapproval, a clearer picture of these behaviors can be achieved from examining the percentage of all observed teacher statements which are approval and are disapproval. These percentages are summarized in Table 9 along with similar behaviors for the teacher aides (where available). It will be noted that only two of the thirteen teachers were observed to use more approval than disapproval statements. One of these teachers in fact was observed to give 90% approval comments and only 10% disapproval comments. The predominant picture, however, is one in which disapproval is the more typical behavior and were in some classes, almost the only

behaviors.

Table 9

Percent Use of Approval and Disapproval by Teachers and Aides

Teacher	Percent Approval	Percent Disapproval	Aides	Percent Approval	Percent Disapproval
1	56	44	1	50	50
2	22	78	2	-	-
3	42	58	3	-	-
4	40	60	4	0	100
5	31	69	5	-	-
6	20	80	6	23	77
7	15	85	7	17	73
8	19	81	8	-	-
9	90	10	9	43	57
10	46	54	10	0	0
11	45	55	11	18	82
12	20	80	12	-	-
13	45	55	13	3	97

A similar picture emereges with respect to the aides but it should be noted that none of the aides used approval statements more frequently than disapproval statements. These data are consistent with the earlier work of Anderson (1945) and with Meyer and Thompson (1956) in that the predominant teacher response is disapproval. A breakdown of the kinds of behaviors for which the children received disapproval and approval is shown in Tables 10 and 11. Examination of Table 10 indicates that the most frequent basis for a teacher disapproval statement is a child's failure to follow specific directions. More specifically, the Conformity category (13) involves the child's following

a general set of classroom rules which are frequently described as necessary for the orderly day-to-day functioning of the classroom.

Table 10

Percentage of Disapproval Statements by Behavioral Categories

Class	11	12	13	14	15	16	17	18	19
W/N									
1			71		9	5			15
2		1	83		2	2	11	1	
3	1	4	67	1	4		14		6
4		3	71	1		4	12		10
5		7	64	3	1	1	6	1	15
6	5	2	60	1	1	1	20		7
N/W									
7	6	4	61	1	1	3	15		8
8	2	.008	87	2	.001	3	6	.003	1
9	4		71		1	7	13		3
10	.05	.05	97	.05		1	.05	.05	
W/W									
11	10	6	42	2	1	.003	18	1	19
12	3		71			3	13		11
13		3	80	1	.003	4	7		2

The next highest category of disapproval statements is Code No. 19, Motor-Motor activities. These activities involve vigorous play including activities on the jungle gym, bicycle riding, large block play, etc. In a sense it is not surprising that teacher disapproval occurs with this set of activities in that they are potentially physically dangerous if misused. Thus one could imagine that the

observed disapproval statements were largely for the protection of the children. The third largest category is what we have labeled Social and involves interactions with others in the class including helping the teacher or another child or, conversely, an unwillingness to cooperate with others and verbal debate. Of some surprise, given that we are focusing on preschool teachers, is the fact that the teacher used some disapproval in what is ordinarily considered to be strictly cognitive activities (Code No.'s 11 and 12). These data indicate that during more formal learning experiences, the teachers have a slight tendency, at least, to use disapproval for inadequate performance. The remaining categories reveal very small percentages and, with respect to aggression, suggest that the teachers were reasonably tolerant of this component of the children's behavior.

An analysis of the categories for which the teachers gave approval indicates that the highest percentages of approval came in the two areas involving cognitive activities (Code No.'s 01 and 02). These results are consistent with what is generally thought to be sound teaching practice and one could only wish that the percentages in these two categories were both more consistent over teachers and consistently higher. One of the more disturbing features of the data, however, is the fact that the teachers do not make greater use of approval with respect to the Conformity category. Recall that this was the category for which they give the most disapproval, a fact which suggests that these behaviors are of importance to them, but they do not use approval statements when conformity behavior occurs. Essentially, the same picture holds with respect to the Social category (07), although there is somewhat greater use of approval in that category.

Table 11

Percentage of Approval Statements by Behavioral Categories

	01	02	03	04	05	06	07	08	09
Class									
W/N									
1	29	22		3	4		34		8
2	29	15	31				15		6
3	9	50	4				13		16
4	2	27	32	8			27		8
5	26	31	18	2	2		24		1
6	32	46	2				8		14
N/W									
7	23	40	6	1	4		17		11
8	33	21	16				13		17
9	79	2	14		.002		1	.002	3
10	79	4	17						
W/W									
11	31	32	3	3	.002		16		13
12	21	28	4				14		30
13	65	30	1	1			3		1

Another way of examining teacher approval and disapproval behavior in the classrooms is to divide the observed frequencies by amount of time, resulting in a rate measure, as previously described. This procedure essentially equates scores over classrooms and permits more formal statistical analyses. For example, it was possible to examine the average rate of approval statements in comparison with the average rate of disapproval statements and, by means of a t test

for correlated means, determine if the rate differences are statistically significant. This analysis resulted in a statistically significant difference (t = 2.01; df = 13; $p < .05$). This means that the rate of emission of disapproval statements by the teachers is significantly higher than the approval rate. The relationship between the approval and disapproval rates is not, however, statistically significant (rho = .10). Comparisons between the black teachers and the white teachers with respect to verbal approval and with respect to disapproval resulted in no statistically significant differences (in both cases the t's were less than 1). The average approval rate for the white teachers was 14.6 and the average approval rate for the black teachers was 21.9. The average disapproval rate for the black teachers was 28.5 and the average disapproval rate for the white teachers was 27.3.

In an effort to detemine if the teacher approval and disapproval rate has any relationship to changes in the children's behavior, the ratio of the approval rate to the disapproval rate was correlated with change in IQ score. Specifically, the ratio was determined for each classroom by taking the average approval rate and dividing by the average disapproval rate. This resulted in 13 ratios ranging from .16 to 9.11. A low ratio indicates that the disapproval rate was substantially higher than the approval rate: whereas, a ratio of 1 or more indicates a higher approval than disapproval rate. In view of the small N and the uncertain nature of the distribution of the approval-disapproval ratio, it was decided to estimate the degree of relationship by using Spearman's rho. The second variable in the analysis was the average gain score on the Stanford-Binet in each of the 13 classes. These gain scores ranged from -2.20 to 15.00.

The resulting rhc is .47 which is statistically significant at the .05 level. This significant relationship indicates that the greater the use of approval relative to disapproval the greater the gain in Stanford-Binet IQ. In view of the fact that both the approval and disapproval statements of the teachers are largely noncontingent, it must be concluded that where verbal approval is used with some frequency relative to verbal disapproval there are generally beneficial effects that are reflected in performance on the Stanford-Binet.

In view of the predominantly negative verbal statements made by the teachers to the children, it seemed worthwhile to examine if the children's behavior in fact corresponded to the teachers' behaviors. The first bit of pertinent evidence is summarized in Table 12 which shows the percentages of "praiseworthy" and "blameworthy" behaviors, and the corresponding rates, evidenced by the children in each of the 13 classrooms. Examination of these data indicates that decidedly higher incidences of "blameworthy" behavior occurred in three of the classes (classrooms 2, 5, and 6). In the other classes where the "blameworthy" percentage is higher than the "praiseworthy", the differences are quite negligible.

Table 12

Percent Praiseworthy and Percent Blameworthy Behaviors and Praiseworthy and Blameworthy Rates by Classroom

Teacher	% Praiseworthy	Rate Praiseworthy	% Blameworthy	Rate Blameworthy
1	61	.14	39	.07
2	41	.99	59	.99
3	57	.08	43	.03
4	64	.26	36	.09

5	41	.12	59	.20
6	37	.09	63	.20
7	51	.24	49	.07
8	50	.17	50	.05
9	49	.14	51	.14
10	47	.26	53	.14
11	72	.17	28	.13
12	66	.14	34	.13
13	49	.11	51	.13

'Praiseworthy' behaviors predominated in five of the classes (classrooms 1, 3, 4, 11, and 12). Analyzing the data in terms of rates of 'praiseworthy' behavior and rates of 'blameworthy' behavior over all classrooms indicate there are somewhat more 'praiseworthy" than 'blameworthy' behaviors but the difference does not quite reach acceptable levels of statistical significance ($t = 2.00$, $df = 12$, $p < .10 > .05$). A comparison of the data in Table 12 with those in Table 9 (see p. 31) does not reveal any consistent patterns. For example, teacher No. 1 used more approval than disapproval and her children evidenced considerably more 'praiseworthy' than 'blameworthy' behavior. Teacher No. 4, however, used considerably more disapproval than approval and her children also evidenced considerably more 'praiseworthy' behavior; similar patterns exist for teachers 11 and 12. The children in classroom 9, where the teacher used an extraordinary amount of approval, evidenced essentially equivalent amounts of 'praiseworthy' and 'blameworthy' behaviors. It is also of some interest to note that in classrooms 2, 5, and 6 the children evidenced considerably more 'blameworthy' than 'praiseworthy' behavior and their teachers were among the highest in their use of disapproval. In an effort to statistically assess the possibility that relationships exist between teacher approval (disapproval) and the children's 'praiseworthy'

or "blameworthy" behavior, rank order correlations between approval rate and "praiseworthy" rate, disapproval rate and "blameworthy" rate, approval rate and "blameworthy" rate, and disapproval rate and "praiseworthy" rate were determined. In only one instance was the resulting rho statistically significant and that occurred for the relationship between approval rate and "praiseworthy" rate (rho = -.57; t = 2.3 df = 11; $p < .05$). This negative relationship indicates that the higher the approval rate of the individual teacher the lower the "praiseworthy" rate of behavior evidenced by the children. This seemingly startling result will be considered later in the context of the teachers' use of contingent approval and disapproval where it will be shown that relatively little teacher approval is contingent on "praiseworthy" behaviors.

Tables 13 and 14 show the percentage of "praiseworthy" and "blameworthy" behaviors in terms of the specific behavioral categories in which they occurred. Recall that these categories are identical to those used in describing the kinds of behaviors to which the teachers gave approval and disapproval. Examination of Table 13 indicates that almost all of the "praiseworthy" berhavior of the children occurred in categories 01, 02, and 03 with a substantially greater proportion occurring in the 03 category (Conformity behaviors). There also are substantial differences between classes. Note, for example, that the range of percentages in the 03 category is from 24% to 59% and that the variation in the 07 category Osocial) is from 2% to 37%. Reference to the percentages in the 03 category for teacher approval (see Table 11, page 34) suggests that the children are emitting a high percentage of "praiseworthy" behaviors but they are not receiving an equivalent amount of approval for these behaviors.

Conversely the children are receiving a substantial amount of teacher approval for the 01 and 02 categories (Cognitive behaviors) but they are not emitting a particularly high percentage of "praiseworthy" behaviors in these categories. Examination of Table 14 indicates that the highest percentage of "blameworthy" behaviors also occur in the Conformity category (category No. 13). Categories 16 and 17 (Aggression and Social) also account for a substantial percentage of the "blameworthy" behaivors of the children. As noted for the "praiseworthy" behaviors in terms of the Conformity category, there is again substantial variation in the children's "blameworthy" behaviors in this category; the percentages range from 14% to 52 %. Comparison of Table 10 (see p. 32) with Table 14 shows that the teachers are in fact giving more disapproval for the Conformity category and it is this category in which there is a high incidence of "blameworthy" behavior. It was noted earlier, in discussing the data in Table 10, that the teachers are apparently relatively permissive with respect to aggressive behavior. That the teachers are permissive with respect to aggression is supported by the fact that the children evidenced a considerable amount of aggressive behavior but received almost no disapproval for it. The children also evidenced "blameworthy" behaviors in Category 17 (Social) for which the teachers in fact do respond with a moderate degree of disapproval.

In view of the variction in the children's behaviors over the different classrooms, it seemed worthwhile to examine teacher variations in their use of approval and disapproval. These comparisons involve the data in Tables 10, 11, 13, and 14. One clear pattern is that teachers, in general, demand that their children conform to classroom rules and they rely on verbal disapproval in achieving

Table 13

Percent Praiseworthy Behavior by Behavioral Category

Teacher	01	02	03	04	05	06	07	08	09
1	26	07	33	01	06	00	25	01	00
2	04	28	56	00	03	01	07	00	00
3	21	28	24	00	00	19	09	00	00
4	04	04	61	03	17	00	11	00	00
5	12	10	38	02	00	00	37	00	02
6	11	22	30	05	08	03	11	00	10
7	12	14	59	00	02	00	11	00	01
8	15	08	56	00	03	00	14	01	04
9	16	14	57	01	00	00	09	00	03
10	15	10	59	01	06	00	09	00	01
11	14	24	50	00	01	00	02	00	09
12	23	10	58	01	00	00	07	00	03
13	20	33	39	00	00	00	06	02	02

Table 14

Percent Blameworthy Behavior by Behavioral Category

Teacher	11	12	13	14	15	16	17	18	19
1	02	00	42	00	02	27	20	00	07
2	02	05	34	01	00	28	17	00	12
3	16	09	40	02	00	19	09	00	05
4	00	00	45	08	13	10	25	00	00
5	03	00	22	07	01	35	24	00	08
6	00	03	14	00	02	43	14	00	24
7	21	03	36	00	02	13	25	00	00
8	01	09	51	03	00	22	11	00	04
9	03	02	48	01	00	24	18	00	05
10	08	00	35	00	01	33	23	00	02
11	02	21	50	00	04	08	08	00	06
12	13	15	52	00	00	06	08	00	06
13	02	22	46	00	00	16	20	00	02

their objective. The data further suggest that this strategy is relatively successful. Note, for example, that 97% of all the disapproval statements made by teacher No. 10 are in the Conformity category and that 59% of her children evidenced "praiseworthy" behaviors in that category as opposed to 35% "blameworthy" behaviors. It should also be noted, however, that this same teacher gave 17% approval statements in this category, which is relatively hgih for this sample of teachers. This general pattern also holds for teachers No. 2, 4, and 7. There are also some instances where the use of disapproval does not work: note for example that

teacher No. 12 uses a great deal of disapproval but her children continue to emit better than 50% "blameworthy" behaviors in the Conformity category. Teacher No. 13 was observed to give 80% of her disapproval comments in the Conformity category, as opposed to 1% approval, yet her children evidenced 39% "praiseworthy" behavior as opposed to 46% "blameworthy" behaviors in the Conformity category. It would appear that there are other attributes of the teacher-pupil relationship that apparently contribute to the success of disapproval in bringing about conformity behavior.

Another interesting finding occurs with respect to teacher No. 6 and categories 09 and 19 (Motor-Motor). It will be noted from Table 14 that 24% of the "blameworthy" behaviors of her children are in category 19, whereas 10% of their "praiseworthy" behaviors are in category 09. Each of these percentages are the highest among the classrooms in that category. Examination of Table 10 shows that this teacher gave the highest percentage of disapproval of all the teachers for category 19 and is approximately average in the amount of approval. These data suggest at least two possibilities: (1) that Motor-Motor activities played a large role in this classroom thus providing greater opportunity for the use of approval and disapproval and also for displaying "praiseworthy" and "blameworthy" behaviors: or (2) this particular teacher was especially concerned about the behaviors of the children in this particular aspect of classroom activity. The former interpretation seems more accurate in view of the fact that the most "praiseworthy" and "blameworthy" behaviors were observed in category 09 (19) for this classroom.

An effort was made to analyze the Cognitive categories in terms of both the children's behaviors and the teachers' behaviors. Combining the percentages within classes for these two categories for both the children and the teachers, results in a relatively homogeneous distribution of scores over classrooms; that is, the relative frequencies of children's "praiseworthy" and "blameworthy" behaviors and the relative distributions of approval and disapproval behaviors are equivalent over classrooms. As a consequence, all efforts to tease out possible relationships between these categories of behavior and with other measures (the Stanford-Binet) were fruitless.

In order to complete the picture of the interactions between teachers and children within the sample Head Start classrooms, the degree to which the teachers responded to the 'praiseworthy" and "blameworthy" behaviors of the children was examined. The relevant data were derived from the Contingency Index (CIP and CIB). Table 15 summarizes the percentage of 'praiseworthy" behaviors and "blameworthy" behaviors attended to and the corresponding rates of attending behavior by the teacher.

Table 15

Percent Attended Praiseworthy and Blameworthy Behaviors

Teacher	Attended Praiseworthy	Rate Attended Praiseworthy	% Attended Blameworthy	Rate Attended Blameworthy
1	10	.23	58	.77
2	23	.42	45	.69
3	36	.86	52	.74
4	20	.38	35	.48
5	15	.22	41	1.02
6	48	1.06	32	.61
7	32	.88	58	1.03
8	17	.67	33	.18
9	16	.22	18	.27
10	10	.28	22	.35
11	31	.65	52	1.71
12	21	.48	41	1.09
13	22	.28	22	.33

Examining first the percentage figures, it becomes immediately obvious that the teachers attend considerably more to the children's "blameworthy" behaviors than to their "praiseworthy" behaviors. The only exception occurs in classroom 6 where the teacher attended to the "praiseworthy" behaviors some 48% of the time as opposed to 32% attending to the "blameworthy" behaviors. These data clearly indicate that the teachers' disapproval behaviors are more contingent on behavior than their approval behaviors and, as noted previously, this meets with success in some classrooms, at least with respect to the behavioral category of Conformity. It should also be noted that, as with our other indices, there is considerable variation among the teachers both in the degree to which they attend to either "praiseworthy" or "blameworthy" behaviors and, interestingly enough, the degree to which their behaviors are contingent altogether. With respect to variation in "praiseworthy" behavior it should be noted that the range is from a low of 10% to a high of 48%: the range of "blameworthy" behaviors is from 18% to a high of 58%: and that some teachers, for example teacher No. 10, attended to only 10% of the "praiseworthy" behaviors and 22% of the "blameworthy" behaviors. Interestingly enough teacher No. 10 has the highest percentage of approval behaviors (some 90%) as opposed to 10% disapproval statements: apparently this teacher's use of approval is unsystematic.

For the purpose of statistical analyses, it was necessary to convert the percentages into a rate index in order to equate the classrooms for time. A t test for correlated means between the rates of "praiseworthy" and "blameworthy" behaviors indicated that the difference is not statistically significant ($t < 1$). A rank order correlation between the "praiseworthy" and "blameworthy" rate for the 13 sample

classrooms resulted in a rho of +.21 which is not statistically significant. The rho indicates that the attending behaviors of teachers are relatively independent for praiseworthy and blameworthy behaviors.

Discussion

The primary purpose of this study was to determine if a sample of white and black teachers of Head Start children evidenced bias toward any one of four sex by race characteristics of children: Male-Negro, Male-White, Female-Negro, and Female-White. Evidence for the existence of biased behavior was defined in terms of the distribution of verbal approval and disapproval received by the children in each of the categories from their teachers. Based on the existing research literature, it was anticipated that male children would receive a disproportionately greater share of teacher disapproval behavior than female children; that Negro children would receive a disproportionately greater share of teacher disapproval and that male Negro children in particular would receive a disproportionately greater share of teacher disapproval. It was not possible to make specific predictions concerning teacher approval behavior because the research literature did not indicate any decided differences between males and females. If anything, there was some expectation that, at the very least the least preferred group of children would receive a smaller amount of teacher approval.

As a safeguard against making an unwarranted conclusion that prejudice of some kind was operating, the children were also observed to determine the frequency with which they evidenced "blameworthy" and "praiseworthy" behaviors. The strategy in this case was to examine

teacher behavior in terms of the children's actual behavior· that is, it might have been that one or another group of children received a disproportionate amount of teacher disapproval but, in fact, were displaying a disproportionate amount of 'blameworthy' behavior. The point here was not to justify the disapproval behavior of the teacher but, rather, to show that in terms of society's definition of 'disapprovable' behavior the teacher's behavior was in fact justifiable.

Although there were one or two exceptions, the several analyses of the data failed to indicate any evidence that the sample of 13 Head Start teachers were biased toward either males, blacks, or particularly black males. The exceptions involved one teacher who tended to give male children more disapproval than females but she did this equally among black and white males. The second exception involved a black teacher who evidenced an unusual amount of approval behavior in the classroom but gave a disproportionately low amount of this approval to white females.

In terms of the purpose of this study, it is something of a pleasure for a change to have to explain "negative" results. Even so, no one will be naive enough to accept our data as evidence that the psychological environments, as defined in this study, of the four categories of children, are similar. Contrasting our data with other studies and with commonly held assumptions suggests that our apparently inconsistent data resulted from some methodological flaw· including the possibility that either our sample of Head Start teachers, or Head Start teachers in general, are not representative of teacher attitudes or that the demands of the preschool situation are not such that teachers are particularly threatened by deviant behaviors.

The first interpretation is essentially methodological and suggests a number of distinct possibilities. Perhaps the most obvious is the possibility that the presence of observers somehow modified the behavior of the teachers. There is nothing definitive in the data which permits an evaluation of this possibility but it does appear unlikely that teachers would be able to monitor their disapproval behavior so carefully that the distribution of disapproval was essentially equivalent over groups. Furthermore, that the teachers did not monitor their disapproval remarks seems apparent in view of the very high percentages of disapproval, relative to approval, statements made by the teachers. If one wanted to appear as a warm, positive teacher, it would not seem reasonable to evidence 85% disapproval behavior. Finally, the teachers were not aware of what the observers were recording.

Another possibility is that the sample of 13 Head Start teachers was somehow biased. This criticism has somewhat greater credence due to the fact that we had to gain approval of the Head Start Center Directors and the teachers in order to conduct the general evaluation program. One might reasonably believe that those Center Directors and teachers who were more confident about their own programs and about themselves as individuals would have been more willing to agree to our using them and their children in the evaluation project. It is true that we experienced numerous rejections of our proposal to conduct the evaluation and, in view of this, our sample can under no circumstances be considered as representative. It is of course also possible that the teachers who do become involved in Head Start classrooms are, as a population, not representative of preschool or elementary school teachers. A person who voluntarily becomes involved in an educational program for deprived children is undoubtedly aware of the problems that will be

encountered and may be particularly aware of the possibility of having to deal with children of different races. In this sense, our sample of teachers was undoubtedly selective because all of our classes involved racially heterogeneous groups of children· a factor that a teacher would probably know before she accepted the position.

Perhaps the most plausible explanation for the failure to find significant racial or sexual bias rests in the nature of preschool programs. Our data are entirely consistent with the results reported by Anderson, et al., (1945, 1946)· the predominant behavior of the teachers was, to use Anderson's term, dominative. Anderson did not, however, examine to see if the dominative contacts of the teachers were unequally distributed among the children in the class (presumably this would have been restricted to sex differences). The assumption made in this study was that male children, and male black children in particular, would receive more teacher disapproval because their cognitive and social behaviors are more likely to be inconsistent with the expectations of the white female middle-class teacher. It may be, however, that the demands of the preschool situation, particularly in terms of cognitive achievements, are so minimal that the teacher is not particularly threatened by failure in this area. In other words, it is possible that the teachers' expectations for cognitive achievement were very marginal and that the major objective was to teach the children to conform to the rules of the classroom. In this case, according to the 'praiseworthy' and 'blameworthy' behaviors of the children, she encountered the same number of difficulties regardless of the sex and race of the child. It is certainly clear that the male Negro children had, on the average, the lowest Stanford-Binet IQ which, according to deGroat and Thompson (1949), is a reasonably good indicator of those

children who will receive a disproportionate frequency of teacher disapproval. If our interpretation is correct, and if it is also true that Negro children experience racial prejudice in the primary school, then one can conclude that the Head Start experience provides Negro children with an initial educational setting where they do not experience discrimination, at least in terms of teacher disapproval behavior. This is not to suggest that any group of children are experiencing a particularly positive environment.

There were two additional issues of primary concern in this study and they related to differences in the approval-disapproval behavior of white as opposed to black teachers and the approval-disapproval behavior of teacher-aides. No specific hypotheses were made with respect to the effects of teacher race as this variable interacts with sex and race of the child. As it turned out, the black teachers used more approval (the difference was not statistically significant) but there were no discernible differences in the behaviors of the black and white teachers toward the four groups of children. It should be noted, however, that our sample of Negro teachers was quite small and that all of our Negro teachers were working with racially mixed classes which may have further contributed to the selective nature of this sample. Assuming for the moment that the black teachers are representative, it appears that their values, at least as expressed in terms of the behaviors to which they give approval and disapproval, were quite similar to those of the white teachers. These results can be interpreted as meaning that Negro teachers incorporate the white middle-class behavioral standards and insist that the children in their classes, both black and white, conform to these standards.

With respect to the aides, it is not really possible to make definitive statements because the amount of observation possible was restricted in terms of our personnel limitations. Sufficient data was collected, however, to suggest that the disapproval-approval behavior of teacher-aides is not different from that of the teachers themselves. If any difference exists, it is in the direction of the teacher-aides evidencing a higher degree of disapproval and a lower degree of approval than their teacher counterparts. Evaluation of these results must be considered as merely a first approximation because of the limited observation time and because of the possibility that the teachers placed the aides in the role of "monitor" where they would be more likely to respond to "blameworthy" behaviors. That the behavior of the teacher-aides was similar to the teachers' is not surprising in view of some data reported by Meyer (1967). He found that during a six-week program there were significant shifts in the aides' perceptions of the children in the direction of conformity with the teachers' perceptions of the children. Thus one would expect that, at least with respect to approval and disapproval, the aides will reflect rather closely the teachers' behaviors. In effect, it is possible that the aide relates to the teacher in terms of some implicit power relationship where the aide models her behavior on that of the teacher. A similar interpretation might explain the similarities in behavior of the Negro teachers with those of the white teachers.

As an outgrowth of the primary purpose of this project, the data permit a general description of teachers' and children's interactions in Head Start classrooms. Consistent with earlier data (Anderson & Brewer, 1945, 1946; Anderson, Brewer & Reed, 1946) it was found that Head Start teachers generally use more disapproval than approval.

These data are also consistent with those reported by Meyer and Thompson (1956) and Meyer (1960) with grade school children. This project contributes two additional variables concerning classroom interaction· namely, the degree to which children's behaviors are "praiseworthy" or "blameworthy" and the degree to which teacher approval and disapproval is contingent upon a child's specific behavior. With this additional data, it is now possible to conclude that not only do teachers disproportionately use verbal disapproval but the behaviors of the children are, by teacher defined standards, somewhat more "praiseworthy" than "blameworthy." It can further be concluded that for the most part the teachers' use of approval and disapproval is noncontingent, but it is much more likely to be contingent with "blameworthy" behaviors than with "praiseworthy" behaviors. Additional support can also be derived from the finding that disapproval rate is negatively related to the Gumpgookies.

This pattern of teacher behavior is obviously inconsistent with general reinforcement theory. The reliance on disapproval, without a concomittant use of approval, should have the effect of temporarily, at least, reducing the frequency of "blameworthy" behavior (Estes, 1944). It would not generate, however, an increase in "praiseworthy" behavior. Teacher disapproval did not effect either the "praiseworthy" or the "blameworthy" rates although there was a significant negative relationship between teacher disapproval and an index of motivation. Teacher approval, however, was significantly negatively related to "praiseworthy" behavior and unrelated to "blameworthy" behavior. These patterns suggest that high teacher approval tends to increase general activity level in which the children have more opportunities to engage in both positive and negative behaviors. Apparently, given the freedom, the children engage in fewer "praiseworthy" activities. That teacher approval

does not relate to "blameworthy" behavior suggests that her disapproval behavior moderates the children's "blameworthy" behaviors. This interpretation suggests that approval and disapproval rates are unrelated, which is the case. Teachers who use approval without disapproval may then have high frequencies of "blameworthy" behavior, whereas high approval and high disapproval would, in effect depress the rates of both "praiseworthy" and "blameworthy" behaviors. Finally, it should be noted that relatively little teacher approval behavior was contingent.

The necessity of including both teacher approval and disapproval in assessing classroom climate is shown in the significant positive relationship between the ratio of approval to disapproval rate and IQ change score. This finding is consistent with our overall interpretation concerning activity levels and approval. Specifically, this ratio indicates that where the teacher uses a greater amount of approval relative to disapproval, the children become more involved in a greater range of activities with the consequence of greater gains on the Stanford-Binet.

An overall assessment of the implications of the results of this research project has both positive and negative elements. On the positive side, it was comforting that there was no evidence of blatant race prejudice on the part of either white or black teachers. On the negative side, it must be concluded that Head Start may be an early introduction to the generally aversive environment that children encounter in their subsequent school experiences. This may not be entirely negative, in the sense that quite clearly this sample of Head Start teachers were trying to teach their children to conform to the rules and regulations of more formalized institutional settings. The data tend to suggest that they are not being very successful at this endeavor and they might even be effectiely reducing the children's achievement motivation and their opportunities to learn. It might be worthwhile to have

Head Start teachers consider whether in fact it is worthwhile to frequently use disapproval for the sake of achieving conformity to regulations at the cost of reduced motivation and a reduction in environmental encounters which might positively influence cognitive development.

A final point. The observational procedures employed in this project were extraordinarily expensive and required considerable logistical planning. Despite the generous funds available to us, and despite our best planning efforts, it was still not possible to achieve the amount of observations on the children and on the teacher-aides that we had hoped would be possible. Despite the costs and the time required for planning, it is felt that observational procedures generate extremely important data and are well worth the problems involved. There is no way presently available by which one can describe a child's psychological environment other than directly observing that environment. Knowing, for example, that a teacher is giving verbal approval 90% of the time to a group of children as opposed to another teacher's using verbal approval only 10% of the time suggests two entirely different environments for children. Conversely, one must directly observe the children's behavior in order to better understand both how they operate in particular teacher defined environments and how they contribute to that psychological environment. It is our hope that future studies concerned with classroom environment will have both the fiscal and personnel resources to more adequately observe behavior and expand beyond our initial efforts.

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APPENDIX A

Adaptive Behaviors

Child's Name _____

Sex _____

Center Name _____

Date _____

Teacher _____

Please indicate as accurately as possible how this child behaves by marking one of the five responses for each item. Base your response to every item on your personal observation and experience with the child.

(Please make one (1) check for each of the 51 items.)

	Never	Once in a while	Some-times	Most of the time	Always	
1. Pretends enthusiastically						(43)
2. Handles his body in coordinated way						(48)
3. Does not grab						(29)
4. Discribes feelings of like or dislike about things						(17)
5. If sick or hurt can report it to parent or teacher; tell what hurts						(4)
6. Knows names of kitchen utensils and how used						(35)
7. Cleans up after himself; helps clean up area						(20)
8. Can name primary colors						(22)
9. Asks questions if doesn't understand words or directions						(38)
10. Makes verbal relations between what is happening and other incidents in or out of school						(41)
11. Waits in line and stays in place						(31)
12. Accepts consequences of own behavior, i.e. does not blame others for own accidents						
13. Uses I, We, He, when speaking						(40)
14. Can use eating utensils to feed himself						(3)
15. Knows name of teacher						(12)
16. Reports infringements on own equipment, food, etc., by another child to teacher or gets it back peacefully						(7)
17. Can draw simple designs and some letters with crayon						(47)
18. Remembers safety rules						(33)
19. Changes verbal mistakes in grammar when instructed						(44)
20. Knows classmates names						(13)
21. Uses more than one color or material when making painting, or decorating pot or bowl						(8)
22. Can hold and control pencil or brush						(25)
23. Notices nature of and changes in properties of objects, i.e., coller missing, form of clay, growing plants, etc.						(23)
24. Knows male from female						(49)

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	Never	Once in a while	Some-times	Most of the time	Always	
25. Can give verbal discription and reasons for his behavior						(42)
26. Is able to go to the toilet by himself						(1)
27. Knows TV commercials and characters						(37)
28. Attends to a work activity such as painting or clay for 1/2 hour						(19)
29. Can get from one room to another in building himself						(2)
30. Can cut small shapes approximately 2 in. with scissors						(45)
31. Will share play equipment when requested by teacher						(5)
32. Will share appropriate equipment when requested by another child						(6)
33. Knows shop tools; what used for						(36)
34. Keeps himself relatively clean, and gets cleaned up if he gets dirty						(34)
35. Knows his bus when it is time to go home						(9)
36. Attends to a sit-still activity such as story for at least 10 minutes						(18)
37. Recognizes photograph of himself						(21)
38. Is orderly in line						(11)
39. Knows where he lives						(10)
40. Follows verbal directions						(27)
41. Knows his own classroom						(24)
42. Can stay inside lines when coloring an outline form						(26)
43. Obeys safety rules						(32)
44. Can complete an idea if teacher stops in middle of sentence						(39)
45. Responds to questions about pictures etc. with more than grunts or shrugs; i.e. can describe things						(15)
46. Waits for directions before rushing in						(28)
47. Answers when called on						(30)
48. Comments spontaneously about pictures, exhibits, etc.						(16)
49. Can copy simple geometric figures, circle, triangle, square, etc.						(46)

50. Has most of your teaching experience been with children who have or would have been eligible for Head Start? Yes _____ NO _____ (63)

51. How does this child compare with all the other entering kindergarten children with whom you have had experience. Please check one below. (69)

Very much below average _____ Below Average _____ Average _____ Above Average _____ Very much above Average _____

END 12-11-70